K-12 Tutoring by Peers

Program description:

Peer tutoring programs use students from the same classroom, or sometimes from higher grade levels, to provide one-on-one assistance to other students who are struggling to learn to read. Classroom teachers provide guidance and oversight.

Typical age of primary program participant: 6

Typical age of secondary program participant: N/A

Meta-Analysis of Program Effects

Outcomes Measured	Primary or Second-ary Partici-pant	No. of Effect Sizes	Unadjusted Effect Sizes (Random Effects Model)			Adjusted Effect Sizes and Standard Errors Used in the Benefit-Cost Analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Test scores	P	9	0.27	0.08	0.00	0.22	0.08	7	0.12	0.04	17

Benefit-Cost Summary

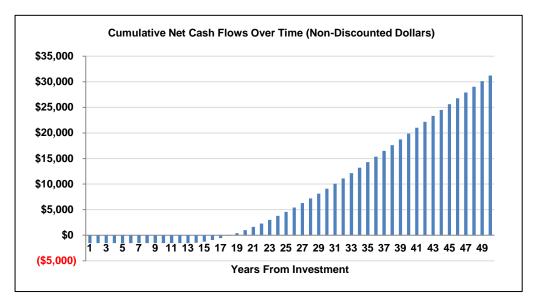| The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2011). The economic discount rates and other relevant parameters are described in Technical Appendix 2.	Program Benefits					Costs	Summary Statistics			
	Partici-pants	Tax-payers	Other	Other Indirect	Total Benefits		Benefit to Cost Ratio	Return on Invest-ment	Benefits Minus Costs	Probability of a positive net present value
	$7,891	$2,904	$0	$1,478	$12,273	-$1,016	$12.08	11%	$11,257	100%

Detailed Monetary Benefit Estimates

	Benefits to:				
Source of Benefits	Partici-pants	Tax-payers	Other	Other In-direct	Total Benefits
Earnings via test scores	$7,891	$2,904	$0	$1,478	$12,273

Detailed Cost Estimates

The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The uncertainty range is used in Monte Carlo risk analysis, described in Technical Appendix 2.	Program Costs			Comparison Costs			Summary Statistics	
	Annual Cost	Program Duration	Year Dollars	Annual Cost	Program Duration	Year Dollars	Present Value of Net Program Costs (in 2011 dollars)	Uncertainty (+ or – %)
	$995	1	2010	$0	1	2010	$1,017	20%

Source: To estimate costs, we assumed that teachers spend an average of one-half hour per day each week to oversee an 8-week peer tutoring program, based on the evaluations included in our analysis. We calculated the value of teacher time using average teacher salaries (including benefits) in Washington State.

Cumulative Net Cash Flows Over Time (Non-Discounted Dollars)

Multiplicative Adjustments Applied to the Meta-Analysis

Type of Adjustment	Multiplier
1- Less well-implemented comparison group or observational study, with some covariates.	1.00
2- Well-implemented comparison group design, often with many statistical controls.	1.00
3- Well-done observational study with many statistical controls (e.g., instrumental variables).	1.00
4- Random assignment, with some implementation issues.	1.00
5- Well-done random assignment study.	1.00
Program developer = researcher	0.5
Unusual (not "real-world") setting	0.5
Weak measurement used	0.5

The adjustment factors for these studies are based on our empirical knowledge of the research in a topic area. We performed a multivariate regression analysis of 61 effect sizes from evaluations of tutoring and parent involvement programs (many parent involvement programs are tutoring-based). The analysis examined the relative magnitude of effect sizes for studies rated a 1, 3, or 4 for research design quality, in comparison with a 5 (there were no level 2 studies; the Technical Appendix describes these ratings). We weighted the model using the random effects inverse variance weights for each effect size and included the type of outcome and program as control variables. The results indicated that research designs 1 through 4 should have a multiplier equal to a 5.

Studies Used in the Meta-Analysis

Dion, E., Roux, C., Landry, D., Fuchs, D., Wehby, J., & Dupere, V. (2011). Improving attention and preventing reading difficulties among low-income first-graders: A randomized study. *Prevention Science, 12*(1), 70-79.

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Greenwood, C. R., & Terry, B. (1993). Achievement, placement, and services: Middle school benefits of classwide peer tutoring used at the elementary school. *School Psychology Review, 22*(3), 497-516.

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